

REMARKS/ARGUMENTS

Claims 1-3, 6-9 and 12-15 are pending.

Claims 12-15 have been added.

Claims 1, 7 and 12 are independent claims.

Applicant has added new Claims 12-15. Applicant respectfully submits that the newly added Claims 12-15 do not contain new matter. Applicant respectfully submits that Claims 1-3, 6-9 and 12-15 are patentable over the prior art.

A. The 35 U.S.C. §103 Rejections of Claims 1-3 and 6-9:

Claims 7-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Stephens, et al., U.S. Patent No. 5,875,507 (Stephens) in view of Fishkin, et al., U.S. Patent No. 6,202,658 (Fishkin). Claims 1-3 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Stephens, et al., U.S. Patent No. 5,875,507 (Stephens) in view of Fishkin, et al., U.S. Patent No. 6,202,658 (Fishkin) and further in view of Moinpour, et al. U.S. Patent No. 5,868,857 (Moinpour). Claims 1-3 and 7-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Moinpour, et al. U.S. Patent No. 5,868,857 (Moinpour) in view of Fishkin, et al., U.S. Patent No. 6,202,658 (Fishkin).

Applicant respectfully submits that Claims 1-3 and 6-9 are patentable over the prior art.

I. Claims 1-3 and 6 are patentable over the prior art:

Applicant respectfully submits that Claims 1-3 and 6 are patentable over the prior art.

A. Claim 1 is patentable over Stephens in view of Fishkin:

Applicant submits that Claim 1 is patentable over Stephens in view of Fishkin. Applicant respectfully submits that Stephens, Fishkin, and any combination thereof, do not disclose

or suggest an apparatus comprising a sonic nozzle positioned at an elevation below the elevation of the scrubber brush and adapted so as to output a sonicated fluid spray that contacts a beveled edge of the vertically oriented substrate located below the sonic nozzle such that fluid having sufficient sonic energy to harm the scrubber brush will not contact the scrubber brush.

Applicant submits that Stephens, in FIG. 6, clearly illustrates nozzles 56 and 58 being located above brushes 26 and 28, respectively, and nozzles 57 and 59 being located below the respective brushes. In Stephens, liquid sprayed from nozzles 56 and 58 is not directed away from the respective brushes 26 and 28. Further, Stephens does not disclose or suggest using sonic nozzles or sonicated liquid. Applicant submits that Fishkin discloses, in FIG. 5, a device having nozzles 35 and 36 located above brushes 51a and 51b. Liquid from the nozzles 35 and 36 is not directed away from the brushes 51a and 51b, and it appears the fluid therefrom may contact the brushes at least due to gravity.

Applicant submits that Stephens, Fishkin, and any combination thereof, do not disclose or suggest an apparatus, wherein a sonic nozzle is angled so as to direct sonicated fluid spray towards the vertically oriented substrate and away from the scrubber brush.

In view of the foregoing, Applicant respectfully submits that Stephens, Fishkin, and any combination thereof, do not render Claim 1 unpatentable. Withdrawal of the rejection of Claim 1 over Stephens in view of Fishkin is respectfully requested.

B. Claim 1 is patentable over Moinpour in view of Fishkin:

Applicant submits that Claim 1 is patentable over Moinpour in view of Fishkin. Applicant respectfully submits that Moinpour, Fishkin, and any combination thereof, do not disclose

or suggest an apparatus comprising a sonic nozzle positioned at an elevation below the elevation of the scrubber brush and adapted so as to output a sonicated fluid spray that contacts a beveled edge of the vertically oriented substrate located below the sonic nozzle such that fluid having sufficient sonic energy to harm the scrubber brush will not contact the scrubber brush.

Applicant submits that Moinpour, in FIGS. 2A and 2B discloses a double-sided scrubber having a top side brush 201 and a bottom side brush 202. In Moinpour, the wafer 200 is oriented horizontally. Therefore, Moinpour does not disclose or suggest a vertically oriented substrate. As noted above, Fishkin discloses, in FIG. 5, a device having nozzles 35 and 36 which are located above brushes 51a and 51b. Liquid from the nozzles 35 and 36 is not directed away from the brushes 51a and 51b.

Applicant further respectfully submits that Moinpour, Fishkin, and any combination thereof, do not disclose or suggest the apparatus wherein the sonic nozzle is angled so as to direct the sonicated fluid spray towards the vertically oriented substrate and away from the scrubber brush.

In view of the foregoing, Applicant respectfully submits that Moinpour, Fishkin, and any combination thereof, do not render Claim 1 unpatentable. Withdrawal of the rejection of Claim 1 over Moinpour in view of Fishkin is respectfully requested.

In view of the foregoing, Applicant respectfully submits that Claim 1 is patentable over the prior art. Allowance of Claim 1 is respectfully requested. Allowance of Claims 2, 3 and 6, which depend from Claim 1, is also respectfully requested.

II. Claims 7-9 are patentable over the prior art:

Applicant respectfully submits that Claims 7-9 are patentable over the prior art.

A. Claim 7 is patentable over Stephens in view of Fishkin:

Applicant respectfully submits that Stephens, Fishkin, and any combination thereof, do not disclose or suggest an apparatus comprising a sonic nozzle positioned at an elevation below the elevation of the scrubber brush and adapted so as to output a sonicated fluid spray that contacts a major surface of the vertically oriented substrate supported by the plurality of rollers at a position below the roller brush such that fluid having sufficient sonic energy to harm the scrubber brush will not contact the scrubber brush.

Applicant further respectfully submits that Stephens, Fishkin, and any combination thereof, do not disclose or suggest the apparatus wherein the sonic nozzle is angled so as to direct the sonicated fluid spray towards the vertically oriented substrate and away from the scrubber brush.

As noted above, Stephens, in FIG. 6, clearly illustrates nozzles 56 and 58 being located above brushes 26 and 28, respectively, and nozzles 57 and 59 being located below the respective brushes. In Stephens, liquid sprayed from nozzles 56 and 58 is not directed away from the respective brushes 26 and 28. Further, Stephens does not disclose or suggest using sonic nozzles or sonicated liquid. As also noted above, Fishkin discloses, in FIG. 5, a device having nozzles 35 and 36 located above brushes 51a and 51b. Liquid from the nozzles 35 and 36 is not directed away from the brushes 51a and 51b.

Applicant submits that Stephens, Fishkin, and any combination thereof, do not disclose or suggest an apparatus, wherein a sonic nozzle is angled so as to direct sonicated fluid spray towards the vertically oriented substrate and away from the scrubber brush.

In view of the foregoing, Applicant respectfully submits that Stephens, Fishkin, and any combination thereof, do not render Claim 7 unpatentable. Withdrawal of the rejection of Claim 7 over Stephens in view of Fishkin is respectfully requested.

B. Claim 7 is patentable over Moinpour in view of Fishkin:

Applicant respectfully submits that Moinpour, Fishkin, and any combination thereof, do not disclose or suggest an apparatus comprising a sonic nozzle positioned at an elevation below the elevation of the scrubber brush and adapted so as to output a sonicated fluid spray that contacts a major surface of the vertically oriented substrate supported by the plurality of rollers at a position below the roller brush such that fluid having sufficient sonic energy to harm the scrubber brush will not contact the scrubber brush.

As noted above, Moinpour, in FIGS. 2A and 2B discloses a double-sided scrubber having a top side brush 201 and a bottom side brush 202. In Moinpour, the wafer 200 is oriented horizontally. Therefore, Moinpour does not disclose or suggest a vertically oriented substrate. As noted above, Fishkin discloses, in FIG. 5, a device having nozzles 35 and 36 which are located above brushes 51a and 51b. Liquid from the nozzles 35 and 36 is not directed away from the brushes 51a and 51b.

Applicant further respectfully submits that Moinpour, Fishkin, and any combination thereof, do not disclose or suggest the apparatus wherein the sonic nozzle is angled so as to direct the sonicated fluid spray towards the vertically oriented substrate and away from the scrubber brush.

In view of the foregoing, Applicant respectfully submits that Moinpour, Fishkin, and any combination thereof, do not render Claim 7 unpatentable. Withdrawal of the rejection of

Claim 7 over Stephens in view of Fishkin is respectfully requested.

In view of the foregoing, Applicant respectfully submits that Claim 7 is patentable over the prior art. Allowance of Claim 7 is respectfully requested. Allowance of Claims 8 and 9, which depend from Claim 7, is also respectfully requested.

III. Claims 12-15 are Patentable Over the Prior Art:

Applicant respectfully submits that Claims 12-15 are patentable over the prior art. Applicant respectfully submits that Claim 12 is patentable over Stephens, Fiskin, Moinpour, and any combination thereof.

Applicant respectfully submits that Stephens, Fiskin, Moinpour, and any combination thereof, do not disclose or suggest an apparatus comprising a sonic nozzle positioned at an elevation below the elevation of the scrubber brush and adapted so as to output a sonicated fluid spray that contacts a major surface of or a beveled edge of the vertically oriented substrate supported by the plurality of rollers.

Applicant incorporates by reference herein the remarks provided above for Stephens, Fishkin, and Moinpour, regarding Claims 1 and 7 as if fully restated herein.

Applicant further respectfully submits that Stephens, Fiskin, Moinpour, and any combination thereof, do not disclose or suggest the apparatus wherein the sonic nozzle is angled downwardly and away from the scrubber brush so as to direct the sonicated fluid spray towards the vertically oriented substrate and away from the scrubber brush.

Applicant incorporates by reference herein the remarks provided above for Stephens, Fishkin, and Moinpour, regarding Claims 1 and 7 as if fully restated herein.

In view of the foregoing, Applicant respectfully submits that Claim 12 is patentable over the prior art. Allowance of Claim 12 is respectfully requested. Allowance of Claims 13-15, which depend from Claim 12, is also respectfully requested.

IV. Conclusion:

For the above reasons, Applicant respectfully submits that pending Claims 1-3, 6-9 and 12-15 are in condition for allowance.

Allowance of pending Claims 1-3, 6-9 and 12-15 is respectfully requested.

Applicant does not believe that any fees are due with this Amendment. However, in the event that any fees are due, please charge Deposit Account No. 04-1696 for any such fees required by this Amendment. The Applicant encourages the Examiner to telephone Applicant's Attorney should any questions remain.

Respectfully Submitted,



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